数論セミナー

2023 年 1 月 13 日 金曜日 16：40-　Zoom

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Title：Approximations with mod 2 congruence conditions

Abstract：
In the study of Diophantine approximation，a natural question is which rationals p/q minimize |qx-p| with a bounded condition over q. We call such rationals the best approximations. The regular continued fraction gives an algorithm generating the best approximations. From a general perspective，we are interested in the best approximations with congruence conditions on their numerators and denominators. It is known that the continued fraction allowing only even integer partial quotients generates the best approximations whose numerator and denominator have different parity. In this talk，we explain the connection between the best approximations and the Ford circles. Then we explain how we can induce continued fraction algorithms that give the best approximating rationals with congruence conditions of modulo 2. This is joint work with Dong Han Kim and Lingmin Liao.

（世話人：秋山茂樹）